1: Warner E-5 (1926-1929) 1937
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an approximate date of his first intrusion into the Arafura Sea by means of the tamarind tree. A few of the larger trees were cut down and cross-sections taken to show the number of growth rings on the tree. It was thought that by determining the amount of time shown by the tree rings and adding approximately two-thirds of the time it took the parent tree to grow, it might be possible to say at least that the Malay had been coming for the period represented by their growth, even though we could not say he had been in North Australia before then. Unfortunately, according to competent botanists, it is impossible to date a tamarind by its tree rings.

The writer excavated two large shell mounds on Millingimbi Island, in the Crocodile group, both of which had tamarind trees near, or growing on them. One of these kitchen middens surrounded a water hole that was known generally to all the aborigines as Macassar Well. Although I was able to accumulate a large collection of native artifacts in the eight feet of shell excavated, I did not find any that were Malay. This, however, does not demonstrate a late Malay invasion because negative evidence does not prove the Malay was not there. Furthermore, the bases of the trunks of the tamarind trees on the mound were well covered with refuse shell. One tree was, by measurement, well over a foot under the accumulated shell. Since the accumulated refuse was well packed and hardened by time, this seems to point to a considerable period of Malay contact with North Australia. The number of people using this mound was never large, and it would take such a group a considerable period of time to throw away a sufficient number of mollusk shells to form a foot of debris around the base of a tamarind tree.

The ripe tamarind pods are eaten and greatly appreciated by the natives. They are looked upon as a part of the general economic flora, although it is known that they were derived from the Malay. No native would ever think of planting a tamarind tree for later use.

From this brief summary of the Malay influence on the material culture of the Murngin, it is obvious that the number of Malay contributions was small, and especially when considered from the larger aspect of the total aboriginal culture, of no great numerical importance. Looked at from the point of view of Malay civilization, it can be seen that the greater part of Malay technology was not adopted. All the objects taken over by Murngin culture were but modifications of original indigenous inventions, with the possible exception of the Malay pipe. The exotic dugout canoe, with its mast and sail, partially took the place of the bark canoe, but did not entirely supplant it. The tamarind tree, although a part of the culture because it contributes, however slightly, to the Murngin larder, is not a true cultural element, since Murngin civilization is in no way responsible for its existence. It is an integral part of Malay culture, since it is planted and is

1: Warner E-5 (1926-1929) 1937
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north and southeast on the periphery not only of the Murngin but also of the whole of Australia suggests that this method was first and that the hollow log is a later intrusion. Against this is the fact that the use of the hollow log as a bone repository is not an isolated item in Murngin material culture, for the log is used as a basic material for the making of a number of objects such as the trumpet and the drum and their smoking pipes.

An examination of these last three objects from an historical point of view proves fruitful when we remember that the pipe is quite recent in Murngin culture, having been brought in by the Malays. The Uvar drum seems to be fairly late because it is associated with the Ulmark ceremony wherever it is found, and the Ulmark is only partly distributed in the Murngin clans and also seems to be spreading in from the south. It is also not found in the northeastern clans where the hollow-log burial is absent. There are a number of clans farther south than Wessel Island which do not have the Ulmark drum. Of the objects made from a hollow-log form, only one seems comparatively old within Murngin culture. Their comparative recency lends color to the belief that the hollow-log burial is more recent, particularly when one remembers its distribution. This last bit of evidence is obviously insufficient by itself and is merely offered as support for the general thesis of the recency of log burial.

The conclusive proof of this historical induction comes from archaeological finds. Around Arnhem Bay, Buckingham Bay and at Caddell Straits, as well as farther inland, the bones of great numbers of skeletons can be found in the dry rock shelters at the present time. Some of them were collected by the writer. They had been laid out in burial position and some had pieces of bark lying with them. The natives said that they were the bones of very old people who once lived there but who belonged to a different race. Some of them attach the destruction myths to the disappearance of this race whose bones repose in the rock shelters, and others said they were the bones of Wongar people. The bones showed indications of having been covered with red ocher, and the skulls when measured and observed demonstrated that they were authentic remains of Australoid peoples and were undoubtedly racially the same people who occupy the region at the present time. The Murngin knew that these burials were the same as those at Wessel Island, and it was finding the rock burials which brought out the information that Wessel Island people still use this type of interment. With the evidence of a peripheral distribution of rock shelter burials at the present time associated with the findings of rock shelter burials of a former time in the central Murngin area, it seems fairly conclusive proof that the Murngin of the whole area once used the rock shelter method, and that the log coffin interment is more recent than the other.

1: Warner E-5 (1926-1929)1937
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ARCHAEOLOGY AND THE GROUND STONE AXE

412 174 The ground stone axe is normally considered to be comparatively recent in Australia because it is not distributed throughout the whole of the continent; it is not found in the southwestern part of Australia. Such evidence is not conclusive since the spear-thrower, which is looked upon as an old trait by many authorities, is not found in certain sections of southeastern Australia. It is largely because European stratification shows it to be more recent than the chipping or flaking techniques found in the Old Stone Age cultures in the sites of such countries as France and Spain that this assumption has been made for Australia. The stone axe is the only ground [324] stone implement found in Australia, for the knives, spear heads and similar tools and weapons are made by the chipping and flaking techniques. The Murngin possess this implement; the writer made a fairly large collection of them. The stone axe is little used by the people on the coast because they [177] have acquired Malay iron axes and more recently European ones, but nevertheless they are still in use in the interior and occasionally along the coast.

●172 Because the axe is stone and durable it gives one a good opportunity to use archaeological methods to study its approximate age in Murngin culture and possibly Australian civilization, since there were a number of large shell mounds distributed generally along the Murngin coast and in particular in the island of Millingimbi in the Crocodile group where the present Christian mission is now located. Two of these Millingimbi mounds were excavated by the writer with the help of aboriginal labor and mission picks and shovels.

The largest mound was located about one hundred yards or so from the shore and was shaped like the crater of a volcano with a rock water hole in its depths. This crater-like appearance was so real that the missionaries had called it Meteor Well because an explorer a year or two before my arrival had pronounced it the result of a meteor's fall. Actually, it was the result of human habitation spread around a clan well and the dropping of oyster and other shells around this water hole. This mound was about 425 feet long. The crater was approximately eighty-five to ninety feet across. The mound itself was eight feet wide and eight and one-half feet deep from its highest part to the earth's surface. It tapered off gradually to each side. The Murngin women were still adding shells to the heap by bringing to the water hole for opening baskets full of bivalves dug out of the mud flats along the coast or pried from the rocks of the oyster beds. The seacoast had a bountiful supply of shell food on this side of the island. A trench was sunk in the mound running from the outside to the center of the crater. It measured five feet in width and was excavated through the shell into a foot or more of earth, which gave a fair sampling of the site.

1: Warner E-5 (1926-1929) 1937
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The same varieties of bivalve shells were found throughout the excavation. No stratification of any kind was found. The same tools were discovered a few inches from the bottom (as well as red ocher and white clay paints) that are being used by the modern aborigines of the area. 172

A ground stone axe was found within six inches from the bottom, or eight feet beneath the surface. This seemed to indicate a great antiquity for this implement in this area and therefore at least for its appearance in Australia. The finding of this axe was the most important positive contribution made by the two mounds that were excavated, since it was a positive proof of the long use of this artifact in North Australia.

The age of the shell mound must be considerable. The mound was only one of three larger ones and a number of smaller ones within a few hundred yards. All were composed of a compact mass of broken bivalve shells. The supply of bivalves in this area appears unlimited and forms a large part of the diet of the people; however, the population of the clans of this island was very small and could not have numbered more than twenty-five or thirty people, though during the shell and ritual season it might, for two or three months, rise to eighty or a hundred people; the year-round average could not have been more than approximately forty individuals. The natives said that before the mission came, no one lived there during the height of the rainy season because of its being badly infested with mosquitoes. It seems incredible that mounds the size of these could have been built by such a small group, and only a long period of occupation could account for the quantities of broken shells and the several large mounds.

APPENDIX II

MURNGIN ARTIFACTS

1. Shelters

The Murngin dwellings have a periodical alternation of types. During a good part of the dry season when the winds are not blowing, the only shelter is some tree underneath which a semicircle of ground has been smoothed. In the evening, if the winds are blowing cold, windbreaks are made. Sticks are pushed in the ground, protruding three or four feet, and brush is placed against them, possibly with the addition of a stone or two to keep the brush in place. 342

In addition to these very rudimentary summer shelters, the Murngin possess a number of more advanced house types:

Type 1.—For this type of house, usually built by women, easily bent sticks about six feet long are gathered. The overlapping ends of two are [462]

3: Mountford E-5 (1948) 1956 OI17 Murngin OI17

murdered turtle man, *Madapang*, is now a large rock on the mainland opposite Bremer Island.

Plate 144G, H shows the obverse and reverse sides of the paddle.

The upper panel on the reverse side, G, is occupied by the *dua* green turtle, *garirwa*, and the lower by a similar but larger turtle, *madapang*. The latter is the turtle who, when a man, was killed by the *Mokoi* at Melville Bay. The short transverse panels of cross-hatching near the head and tail of the turtle, *madapang*, indicate seaweed, the food of the creature, and the long panels on either side, the sea.

In the upper panel of the obverse side, H, are five dolphins, called *injipana*, and in the lower, five dolphins of a different species, called *bulanbir*. The cross-hatched panels indicate smooth sea water at the totemic place.

The panels at the head of the upper turtle indicate where the reptile dug in the sand to lay its eggs; the long panels on either side represent sea-water. The rounded end of the paddle indicates that it belongs to a man of the *dua* moiety.[20]

(2) Painted Paddles and Spear-throwers from Groote Eylandt

On Pl. 145 are four paddles from Groote Eylandt, A, B, C, D and E.

No interpretations were gathered of the various designs painted on the paddles. In the upper panel of Pl. 145A is the figure of a man associated with what appears to be a wind symbol,[21] on Pl. 145D a dugong and a turtle, and on Pl. 145E another dugong. Collected by F. D. McCarthy.

On Pl. 146 are four spear-throwers from Groote Eylandt, A, B and C, D and E, and F. Although, as with the paddles, no interpretations were gathered, it is possible to distinguish a dolphin on D, and a turtle and possibly a bandicoot on E. Collected by F. M. Setzler.

(3) The Log Gongs

Two log gongs were collected in Arnhem Land, one (Pl. 147A, C) called *mur*, by F. M. Setzler and F. D. McCarthy, whilst engaged on archaeological research at Milingimbi, and one (Pl. 147D) called *ubara*, by myself, at Oenpelli.

Warner, when carrying out research among the aborigines of Milingimbi during 1927-8, saw the log gong in use and gives a full description of its function.[22] According to him, the gong, which is beaten with a frayed section of pandanus root, is used only in the *ulmark* cycle of ceremonies. When the women hear the sound of the gong, which they believe is the voice of the serpent *muit*,[23] they assemble in the camp and continuously repeat the call, *kail-bo*. This call protects the women from harm, it being the same as that used by the

20. For shape of a *jintja* paddle, Fig. 58A, B.
21. Bark painting of south-east wind, Pl. 241D.
22. Warner (1937), pp. 315-16.
23. Another name for *jurlungur*, the mythical serpent, who swallowed the *Wawalak* sisters (see myth, p. 278, and Warner (1937), p. 372).

[text continues on p. 456]

4: Berndt & Berndt E-5 (1946-1947) 1948
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particular spirit-being has its mythology, ceremonies and elaborate song cycles, some consisting of several hundreds of separate and lengthy songs. This is particularly the case with the concept of the *'Wawolak* Sisters, which have both sacred and secular songs and ceremonies.[3]

The aborigines of this area belong to what Professor Lloyd Warner has called the "Murngin" culture.[3] They consist of groups of separate clans with a more or less common cultural background[4]: "Murngin" is one name of one of these many clans. They stretch from a point north of Rose River on the south-east of Arnhem Land (opposite Groote Eylandt) north along the coast through Blue Mud and Caledon Bays, Cape Arnhem and Yirrkalla, English Company, Wessell and Elcho Islands, Arnhem Bay, Crocodile Islands (around Milingimbi) to Cape Stewart, but do not penetrate far into the interior. Their dialects vary, but belong to one language group.[5] The clans are divided between the *'jiritja* and *'du:a* patrilineal moieties. A subsection system is being gradually introduced from the south and south-west, but has not yet been fully accepted.

These natives are semi-nomadic and hunt and collect food over wide areas. They rely principally on marine foods, which are plentiful, so that their economy is more or less balanced throughout the whole year.

For many years these coastal aborigines have been in direct and indirect contact with alien groups, particularly with the Malayan and Macassan traders who travelled down to the north coast of Australia from the East Indies in search of trepang (bêche de mer) and other natural products obtained by local aborigines.[6] In the course of years of trading, these visitors had much association with the indigenous inhabitants, and established settlements at desirable sites, particularly on the north-eastern corner of Arnhem Land, where they stayed for several months in each year. After the wet season, in about May or June, they returned in their proas on the south-east winds, sometimes taking aborigines as part of their crew. This contact ended (being prohibited by law) in 1907, but Japanese pearlers continued to visit the shores up to the recent war.

Such intensive contact over a long period made a strong impression on the aborigines; this can be observed to-day in certain elements of the religious life and dogma, in secular ceremonies and songs, in mortuary rites and songs, in mythology

[3] A detailed study of north-eastern Arnhem Land religious beliefs and dogma will be published later.

[3] L. Warner, *A Black Civilization*, 1937.

[4] They may be conveniently termed the 'Wu:lamba Confederacy. *Vide* also T. Webb, "Tribal Organization in Eastern Arnhem Land," *Oceania*, Vol. III, No. 4, p. 410.

[5] *Vide* A. Capell, "Languages of Arnhem Land, North Australia," *Oceania*, Vol. XII, No. 4, and Vol. XIII, No. 1. The collective dialects of this language group can, for convenience, be called *'Mi:wulf 'una*.

[6] The date of their first contact is a matter of speculation, but is possibly much earlier than has hitherto been stated. A comparatively large collection of pottery shards, recovered from Port Bradshaw, not far distant from Yirrkalla, to be discussed later, may enable an approximate date to be fixed for the establishment of the Macassan settlements, remains of which are still known to the natives.

8: Berndt E-5 (1946-1950) 1954
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commenced perhaps some hundreds of years ago, when these travellers of the sea expanded their field to include the North Australian coast. They came in search of trade, of trepang (bêche de mer), tortoise-shell, pearl-shell, sandalwood and timber.

But even before this, so these Aborigines tell in the songs that record and preserve their traditions, the "Baijini" people visited their shores. These Baijini, or pre-Macassans, also came from the western islands beyond the Arafura and Timor Seas; and the Aborigines still sing today of the ships in which these people arrived, and the women who came with them; the stone dwellings they built on the Australian mainland; the cloth that they wove and dyed; the clothes they wore, and the way in which they speared fish and cultivated small gardens. They are said to have been paler than the Macassans, a golden brown or copper colour like certain flying foxes. The Baijini era is looked upon, now, as belonging to the far-distant past – a part, almost, of the Ancestral Dreaming period, when the great Spirit Beings walked the earth. In some stories the Baijini are said to have been contemporaries of the most important among the Ancestral Beings, the Djanggawul Brother and Sisters.

The Aborigines distinguish this period from what they regard as historic times, when the Indonesians came sailing to the coast in their praus. They arrived with the north-west monsoons in October or November, staying for at least six months of the year and returning home again with the south-east winds. Occasionally some of them remained behind with their ships all through the dry winter, to be on hand when the fleets arrived at the beginning of the wet season.[1]

We cannot be certain of the approximate period when this Indonesian contact commenced, but tentative calculations place it in the early sixteenth century. Numerous camp sites, archaeological remains, old graves and tamarind trees testify to a prolonged association. Some of the large Macassan settlements have left concrete evidence behind them. In the north-eastern corner, for instance, quantities of pottery fragments have been found on an island at the mouth of Port Bradshaw and along the adjacent mainland.

15:Chaseling M-5 (ca. 1934-1936)1957
OI17 Murngin OI17

361 of carapace scattered in the sand justified the island's reputation for good turtle hunting.

Camps like this have been in use for centuries, and around several of them are hundreds of tons of shells, bones, and refuse. One mound in the Crocodile Islands is over twenty [172] feet high and covers an area of approximately five hundred square yards; when an experimental cut was made into the centre, it was found to consist entirely of shellfish shells.

341 Camp shelters are the crudest imaginable. Prince Petr Kropotkin goes so far as to say that aborigines live in holes in the sand; and as in the case of many misrepresentations, there is some truth in his statement. When the wind is light they scoop up the sand on the windward side and sleep in the depression beside a smouldering fire, and if the wind is cold, a thick wind-break is pushed into the sand. Why should they go to more trouble when they move off the following morning?

In the rainy season nomads become uncomfortably cold and wet and build more elaborate shelters of sticks covered [824] with paper-bark, or of bark from the stringy-bark eucalypt, curved inside out, so that when a number of curved sheets are placed side by side they look like miniature tunnels. Roomy and easily rearranged, these 'balas' suit the winds and rain and sometimes last for the duration of the wet season.

364 Yulengor have no knowledge of sanitation, and they are [361] never in one camp long enough for this form of cleanliness to be forced on them. Refuse and leaves are shovelled on pieces of bark and thrown by the entrance. In cold wet weather shells and food are cooked inside the shelter, and all kinds of waste are thrown on the rapidly increasing midden at the doorway. To camp amidst one's own filth is not regarded as unclean. Before the middens at old camps become overpowering or germinate an exterminating

15:Chaseling M-5 (ca. 1934-1936)1957
OI17 Murngin OI17

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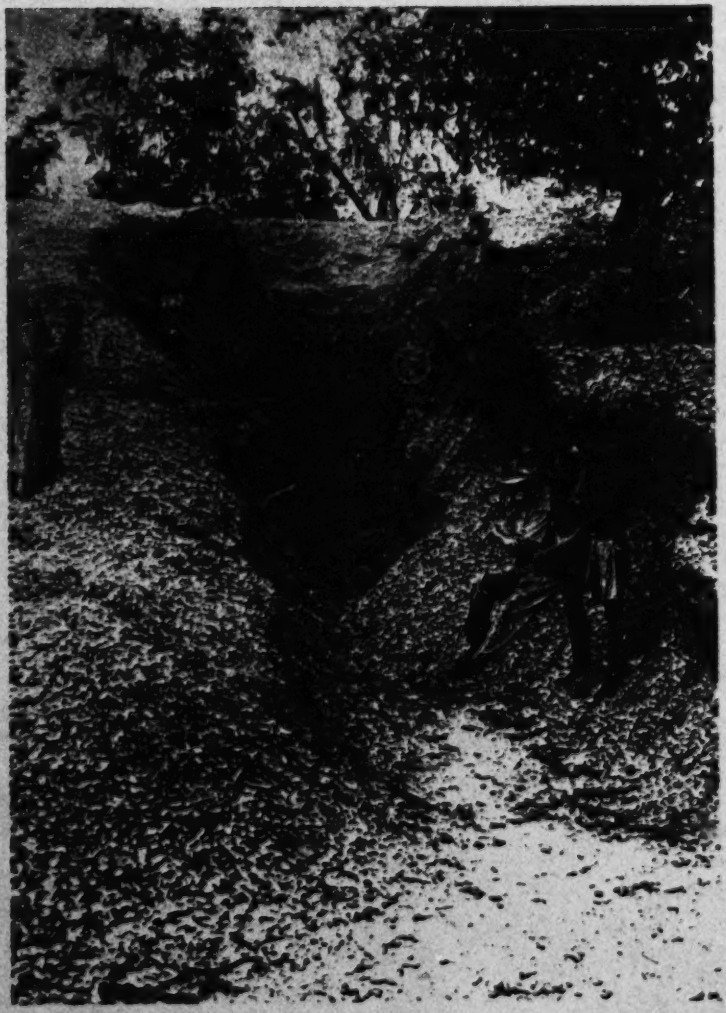

SHELL MIDDEN

An experimental cut was made into a shell midden beside an old Yulengor camp

[facing p 70]